



Australian Bureau of Statistics

CensusAtSchool Australia

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Resources



CaSQ 25B - Using Graphs and Summary Statistics to Investigate Numerical Data

You can download this activity as a rich text file (RTF) using the link at the bottom of the page.

How to: Get a Random Sample from CensusAtSchool

Go to the CensusAtSchool Random Sampler to download a sample.

Reference year: *(select year)* **Sample size:** *At least 40 students*

Select questions: *All*

Location: *Select location* **Year level:** *(select a range of year levels)*

To protect privacy there is a rule built into the sampler that the requested sample size cannot exceed 10% of the respondents for the parameters entered.

Task:

Use a CensusAtSchool random sample to conduct your own investigation and analysis.

1. **Pose a question:** (This is what you want to find an answer to)

2. **Identify your variables:**

When you're looking at numerical data you can look into one or two variables.

- Independent (Explanatory): _____
Dependent (Response): _____

a) *Graphing*: Use the first thirty values from your random sample to graph your data. Think about the most appropriate way to display your data. (There is a grid you can use overleaf)

- | Mean | Mode | Range | Q1 | Median | Q3 | IQR |
|------|------|-------|----|--------|----|-----|
|------|------|-------|----|--------|----|-----|

- What sort of graph did you choose to display your data and why?
- Identify and describe any features or patterns in your graph.
- From your summary statistics, what would be the best statistic to use to describe your measure of centre? Why did you select this statistic as being the best to describe your measure of centre?
- From your summary statistics, what would be the best statistic to use to describe your spread? Why did you choose this statistic?

Write a summary paragraph describing your findings. Make sure you refer to the statistical analysis that supports your comments. If possible, give reasons for the results.

[illegible]

Download the full activity:

RTF

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